

# **INSOMNIA AND ITS MANAGEMENT**

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## Introduction

Insomnia is the most common sleep disorder encountered. It may be defined as a subjective complain of impairment in either the duration depth or restorative qualities of sleep. Patients suffering from insomnia may report difficulties in falling asleep, difficulties in maintaining sleep or early awakenings.

The benzodiazepines constitute present day drug therapy directed towards the management of this condition, as their safety and effectiveness are better established than those of other classes of drugs. However after a long period of dominance in the management of insomnia, benzodiazepines have come under critical review. The factors spurring such criticism include the facts that the use of these drugs is aimed purely at symptomatic relief and not directed towards treating the actual condition causing insomnia. Moreover long-term use of such drugs has been implicated in problems related to drug dependence. This has led to the development of a new approach to the management of insomnia involving a diagnostic assessment directed at uncovering the underlying factors predisposing to insomnia and whenever possible their immediate treatment, together with counselling the patient on sleep hygiene. Studies were carried out to:

- a) investigate trends of insomnia amongst the Maltese population
- b) assess the effectiveness of patient counselling on the management of insomnia

## Methodology

Study 1: The aim of this study was directed at investigating the percentage incidence of insomnia over the Maltese population. Therefore, a number of subjects was randomly selected from the local 1990 Telephone Directory Supplement. Of the 200 subjects originally contacted, 58 declined to cooperate. Questioning of the compliant revealed 46 subjects (32.4%) to be suffering from insomnia. A data sheet containing the relevant information was drawn up, and filled in for each individual, following careful questioning. These included:

- a) age
- b) sex

- c) average number of hours slept per day
- d) nature of sleep disorder:
  - i) difficulty in falling asleep
  - ii) difficulty in maintaining sleep
  - iii) both
- e) any seasonal trends
- f) whether any physician was ever consulted
- g) any medicament taken
- h) any advice given by the pharmacist

Study 2: This study was directed towards the effectiveness of patient education, with respect to sleep hygiene. Of the original 46 individuals found to be suffering from insomnia, 19 were not undergoing drug therapy directed towards treating insomnia, and were therefore considered eligible for inclusion. Of these, 14 accepted participation.

The protocol adopted for this trial involved the following four stages:

Stage 1:

A ten day sleep diary was taken for each subject, in which the patients were asked to record the number of hours slept per night. In this way, it was possible to calculate the mean number of hours slept per individual, per night.

Stage 2:

The aim of his study was to determine the underlying cause of the patient's insomnia. A list of possible factors predisposing to the condition was drawn up, and filled in, for each subject. Based on the results, it was possible to individualise sleep hygiene therapy.

Stage 3:

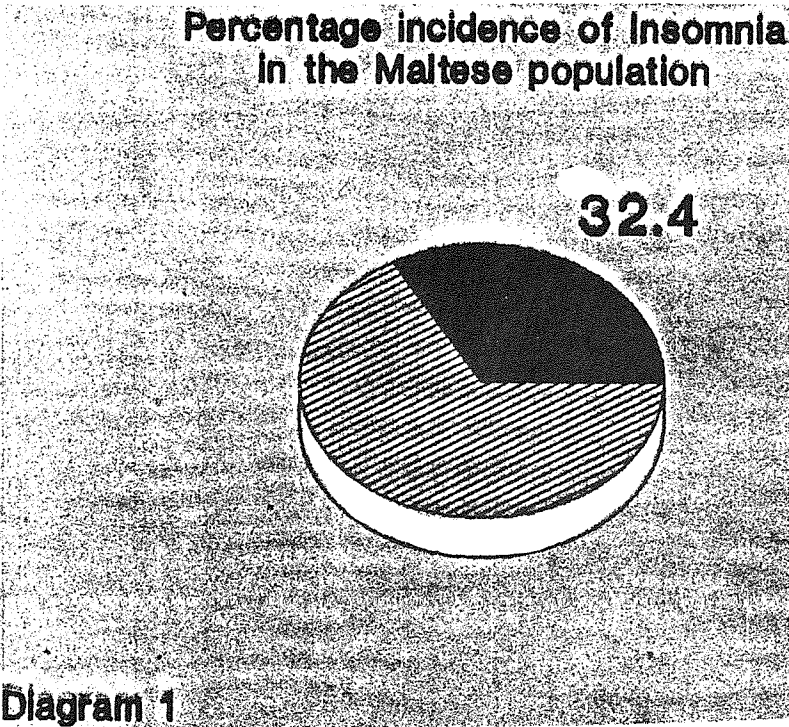
Twelve patients passed into this third stage of therapy. These were individually advised on sleep hygiene after cause was taken into consideration.

Stage 4:

A ten day sleep diary was compiled again, and the results compared to the results in Stage 1. In this way, the effectiveness of therapy could be assessed.

Results

Study 1



### Sex distribution of insomnia

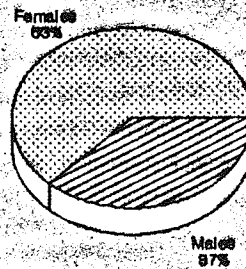


Diagram 2

### Age distribution of insomnia

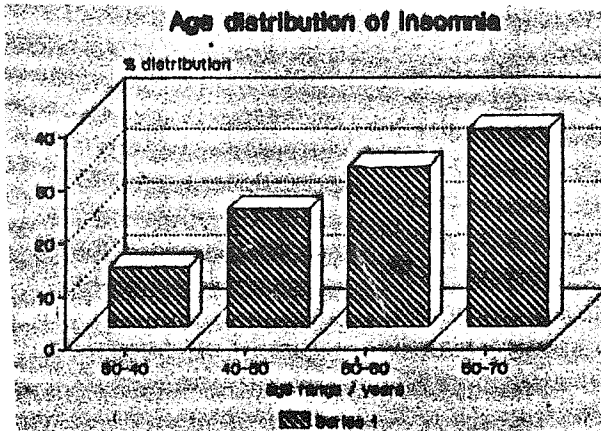


Diagram 3

## Classification of Insomnia

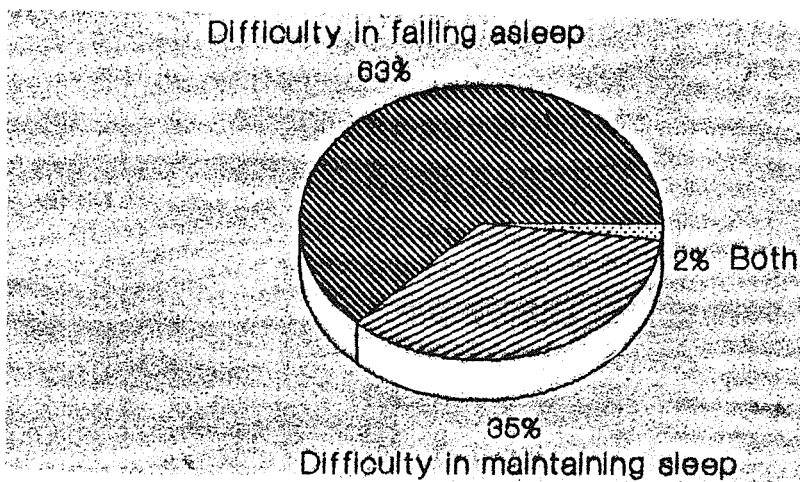


Diagram 4

Approximate no. of hours slept per night

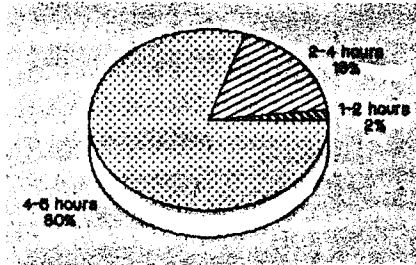


Diagram 5

Seasonal aggravation of Insomnia

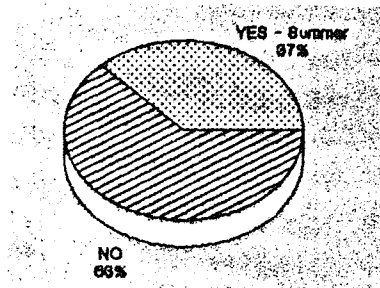
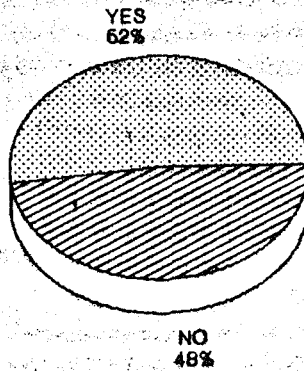


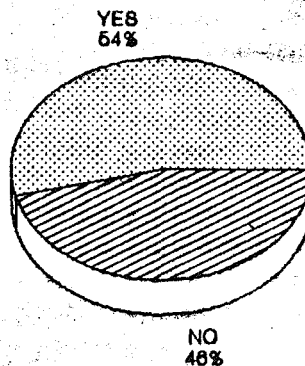
Diagram 6

### **%age patients seeking medical counsel**



**Diagram 7**

### **%age patients immediately referred to drug therapy following medical counsel**



**Diagram 8**



%age patients on drug therapy, with or without medical counsel

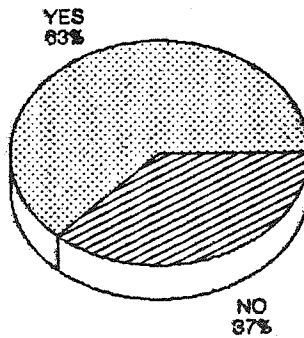


Diagram 9

%age insomniacs deeming pharmacists' advice useful

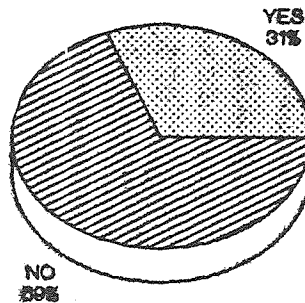


Diagram 10

## Study 2

**Table 1:** Probably underlying causes of Insomnia in participants considered in this study

Patient No.	Source
1	Occupational
2	Occupational
3	Untreated pain
4	Untreated pathological condition
5	Pharmacological
6	Anxiety
7	Anxiety
8	Anxiety
9	Anxiety
10	Depression
11	Depression
12	Adjustment disorder

**Table 2:** Mean number of hours slept per subject per night, before and after therapy

Patient No.	Mean No. of hours slept before	Mean No. of hours slept after
1	4.8	6.7
2	5.2	5.9
3	3.7	7.0
4	4.5	6.6
5	3.3	5.1
6	5.0	5.0
7	5.1	4.9
8	5.1	6.2
9	4.9	5.3
10	2.9	3.4
11	5.2	5.1

## Discussion

Study 1: The results obtained in the first study with regards to the incidence of insomnia and trends related to sex/age can be closely correlated to a similar epidemiological study carried out in the U.S.A. (Mellinger, Balter and Uhlenhuth, 1985). The latter revealed a percentage incidence of insomnia ranging from 13 - 40% of the adult population, prevalence increasing with age and being more common in women. These results compare well with results obtained in this local study (Diagrams 1 - 3).

63% of the gross population of insomniacs were undergoing drug therapy. However, only 52% of the original population had ever sought medical counsel, and these, invariably placed on hypnotic medication, at one stage or another. The resulting discrepancy  $[(63 - 52)\% = 11\%]$  represents the portion of individuals on drug therapy without the necessary legal prescription. It is therefore evident that hypnotics, when used in alleviating insomnia are very much liable to misuse and abuse. It is in this field that the pharmacist can play a prominent role, proposing relevant advice and/or refusing dispensing of the said medication without the required medical prescription. Sadly, the role of the pharmacist is underestimated in this context; this is reflected in an opinion poll presented to those subjects (63%) undergoing drug therapy. Of these, only 31% considered the pharmacist to be in an ideal position as to educate the public in this regard.

Study 2: 9 of the 12 (75%) participants showed signs of improvement, following therapy. This was reflected in an increase in the mean number of hours slept, registered through the ten day sleep diary. This improvement cannot be taken to represent total success, since many of the patients illustrated only marginal improvement in their sleep pattern. Considerable success was however achieved in patients 1,3,4,5,8 and 12, reflecting a success rate of 50% over the original 12 participants.

The one important limitation encountered during this study was the insufficient personnel-patient contact. Studies of this nature are normally carried out in sleep laboratories, the subjects being constantly monitored. Measurements are then carried out by the residing personnel. In this way, chances of error are minimised. In this study, the participant himself was required to keep record of the number of hours slept. Under such conditions, errors incurred as a consequence of inaccurate time-keeping are increased.

## Conclusion

From the results, it appears evident that insomnia is a condition which is both overlooked and underestimated. The insomniac tends to regard the physician simply as the provider of the drug, advice beyond drug therapy severely undermined. This has contributed to the increase in benzodiazepine consumption, and the overprescription of such drugs. The pharmacist, and physician alike should play a more active role when consulted by the insomniac, considering patient history, listening to the patient's worries, making necessary examinations and investigations, reassuring the patient and offering treatment when required.

## References

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Pashley E. Sleep and Insomnia. The Pharmaceutical Journal 1991; 246(6624): 237 - 239